SounPacific
Environmental Services
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Subsurface Investigation Work Plan

Dated:

November 30, 2005

Site:

Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Job # SP-170

Prepared for:

Big Oil & Tire Co.

TABLE OF CONTENTS

TABLES

FIGURES

1.0 EXECUTIVE SUMMARY

At the request of Big Oil & Tire Co. (BO&T), the current property owner, SounPacific Environmental Services (SounPacific) has prepared this *Subsurface Investigation Work Plan* (*Work Plan*) to further delineate the petroleum hydrocarbon contamination at the Northcrest 76 facility at 1500 Northcrest Drive, Crescent City, California (Northcrest 76). Previous subsurface investigations had identified petroleum hydrocarbons in the soils adjacent to the fuel dispenser islands in the eastern portion of the property and in the groundwater throughout the eastern and southeastern portions of the Site. Subsurface investigations to date have not fully defined the extent of the contamination and no monitoring wells are present on the site to monitor any contaminant migration or concentrations. Therefore, SounPacific proposes a subsurface investigation to assist in the delineation of the extent of soil and groundwater contamination and allow the monitoring of groundwater contaminant concentrations. A summary of proposed work is outlined below.

- SounPacific proposes an onsite subsurface investigation at Northcrest 76 to assist in the lateral and vertical delineation of soil and groundwater contamination that includes the installation of groundwater monitoring wells and implementation of a groundwater monitoring program to monitor contaminant levels and possible migration. The investigation will consist of drilling five (5) borings which will be converted into groundwater monitoring wells. Soil samples will be collected from the five (5) well borings, and following the installation of the monitoring wells, groundwater samples will be collected as part of a groundwater monitoring program.

- Soil borings will initially be drilled using direct-push technology to allow for soil samples to be collected and to create a pilot hole for the monitoring wells. After the completion of the soil sampling, the boring will be opened using hollow stem augers to an eight (8) inch diameter to allow for the installation of the two (2) inch diameter

groundwater monitoring wells. The purpose of the wells will be to confirm analytical results from previous grab groundwater sampling, determine actual groundwater flow gradient and direction, and to monitor contaminant levels and contaminant migration over time.

- Using the collected data in cooperation with the data from previous investigations, a Report of Findings (RoF) will be prepared. The RoF will document the activities and findings of the proposed investigation.

2.0 INTRODUCTION

This document presents the *Subsurface Investigation Work Plan* (*Work plan*) for the Big Oil & Tire Co. (BO&T) site (Site) in Crescent City, known as Northcrest 76. This Work Plan was developed per the Northcoast Regional Water Quality Control Board – North Coast Region (NCRWQCB) correspondence dated August 17, 2005, which concurred with SounPacific to submit a workplan to propose the installation of groundwater monitoring wells, implementation of a groundwater monitoring program after well installation, and further define the extent of contamination in the eastern direction from the Site.

2.1 Scope of Work

Based on laboratory analytical results from previous investigations and the NCRWQCB correspondence dated August 17, 2005, the proposed scope of work at this stage in the project is as follows:

- Drill five (5) onsite boreholes, into which groundwater monitoring wells will be installed. Soil samples will be collected from the well borings in an effect to further delineate the extent of soil contamination at the Site.

- Collect soil samples from all five (5) borings that will be visually inspected and subject to field screening using an organic vapor analyzer (OVA) or similar.

- Based upon the results of the field screening, select soil samples will be subject to laboratory analysis following **EPA Method 5035** and using **EPA Methods 8260b and 8015**.

- Survey all wells to a common benchmark, and measure groundwater levels to obtain an understanding of the groundwater flow direction and gradient.

- Conduct an initial groundwater sampling event, after which a quarterly groundwater monitoring program will be implemented. Groundwater samples will be collected and subject to laboratory analysis following **EPA Methods 8260b and 8015**. Groundwater monitoring will be conducted for a minimum of one (1) full hydrogeologic cycle to investigate groundwater contamination, and obtain an understanding of the true groundwater flow direction and gradient over time.

- Prepare a Report of Findings that documents the activities, findings, and results of the proposed investigation, and propose recommendations for further activities. Further groundwater monitoring results will be documented in separate groundwater monitoring reports.

2.2 Site Location

The site is located in Crescent City, California, with a physical street address of 1500 Northcrest Drive. The site is situated approximately 1.5 miles north of downtown Crescent City, on the northwest corner of the intersection of Northcrest Drive and Washington Boulevard (Figure 1).

2.3 Site Description

Northcrest 76 is a retail petroleum facility. Site improvements include a single story building and two (2) dispensers that are covered by a canopy. The dispensers supply regular grade gasoline, premium grade gasoline, and diesel fuel for retail sale. The main structure is used as a mini mart and office for business and cashier purposes. The entrance of the main structure faces east towards Northcrest Drive. A small storage building is located next to the main building near the north side of the Site. The Site is surfaced around the current structure with concrete, asphalt, and vegetation. Sewer and water services are supplied by public utilities. All electrical and telephone lines are located below the ground surface (bgs) (Figure 2).

2.4 Vicinity Description

The surrounding land use in the immediate vicinity is commercial and residential. Humboldt Moving & Storage lies adjacent to, and north of, the property. Washington Boulevard is adjacent to the southern property line, while Northcrest Drive borders the east side of the Site. The Rice Repair Storage Shed borders the Site to the west.

2.5 Hydrogeologic Setting

The Site is located approximately two (2) miles east of the Pacific Ocean and approximately 800 feet west of “No Name Creek.” The Site is generally flat, with the elevation ranging between 533 feet and 536 feet above mean sea level (amsl). The surrounding topography is relatively flat (Figure 3).

According to the 1987 Weed Sheet, the Site is underlain by basement rocks of the Cretaceous-Jurassic age Franciscan Complex. Overlying the Franciscan Complex is the Pliocene-Pleistocene marine and non-marine deposits of the St. George Formation. Overlying the St. George Formation is the Quaternary Battery Formation consisting of both marine and continental deposits.

Groundwater at the Site is at an approximate depth of 21 feet bgs. Based on elevation data collected from temporary wells in September 2004, groundwater flow was calculated to be towards the south (Figure 4).

2.6 Current Site Usage & UST History

SounPacific understands that the property is owned by BO&T of Arcata, California. The main structure on the Site is currently being used as a retail gasoline station and mini mart. At present, there is one (1) 8,000-gallon regular unleaded gasoline underground storage tank (UST), one (1) 8,000-gallon premium unleaded gasoline UST, and one (1) 6,000-gallon diesel fuel UST, all located in the southeastern portion of the property (Figure 2). According to Del Norte County Health Department (DNCHD) files, three (3) *Underground Storage Tank Program Tank Permit Application Information Forms* were completed on March 7, 1990, for the installation of the three (3) double walled USTs currently in use at the station. This system includes a pressurized turbine fuel delivery system, double walled piping of product lines, and a fiberglass coating on the outer UST walls.

Information from DNCHD files indicated that BO&T purchased the site from Liz Puro in 1989. At that time, the site had a total of eight (8) USTs: one (1) 100-gallon UST with contents unknown, one (1) 100-gallon white gas UST, one (1) 150-gallon diesel UST, one (1) 150-gallon kerosene UST, one (1) 500-gallon waste oil UST, one (1) 2,000-gallon premium unleaded gasoline UST, and two (2) 4,000-gallon regular unleaded gasoline USTs. The UST system was composed of single walled steel tanks and fuel was delivered to the dispenser through safe suction technology.

In January of 1989, G.R. Construction of Crescent City, California, removed the eight (8) USTs. The 100-gallon and 150-gallon USTs were reportedly crushed on site, while the remaining USTs were trucked to Hanson Wire and Rope, at 2404 Sandy Prairie Road in Fortuna, California for disposal.

3.0 PREVIOUS INVESTIGATIONS

A file review conducted at the DNCHD yielded the following historical information. It should be noted that many details in the county files, concerning the historical sampling information at the site, appear to be incomplete:

3.1 1989 Tank Removal (Nichols Brothers Precision Tank Testing)

On January 10, 1989, all the USTs at the facility were removed, after which compliance testing was conducted on soil and groundwater samples from the four (4) excavations from which USTs were removed. This testing included the collection of seven (7) soil samples (1-A through 7-A) from the UST excavations (Figure 5) and one (1) water sample (8-A) collected from the former domestic well onsite, with the samples being submitted to North Coast Laboratories for analysis. Samples 1-A, 2-A, 4-A, 6-A, and 7-A, were analyzed for TPHg and benzene, toluene, xylenes, and ethylbenzene (BTXE). Samples 3-A and 5-A were analyzed for TPHd and BTXE. Sample 8-A was analyzed for TPHg only. Laboratory analytical results indicated that TPHg was detected in sample 2-A (site of former premium gasoline UST) at a concentration of 15 ppm and in sample 4-A (site of three (3) small USTs that contained kerosene, diesel, and white gas, plus an unknown UST) at a concentration of 6 ppm (Table 1). All the remaining sample results for hydrocarbon constituents were below laboratory detection limits.

3.2 2001 Dispenser Sampling (SounPacific)

On August 16, 2001, during a routine inspection of piping behind the dispenser covers, a fuel odor was noted. The station manager reported the concern to the main office and a service representative visited the facility to inspect the system and collect a soil sample from beneath the dispenser. The inspection did not identify any leaks or liquid, however, all fittings were inspected and tightened. The collected soil sample was analyzed for TPHg, BTXE, and MTBE. The analysis of the soil sample reported the presence of TPHg (3,100 ppm) and the BTXE compounds; however, no MTBE was reported. The results are summarized in Table 1.

Due to the presence of the contamination, an Underground Storage Tank Unauthorized Release / Contamination Site Report (URF) was submitted to the Del Norte County Health Department (DNCHD) and the NCRWQCB on August 25, 2001, by Greg Sounhein of SounPacific.

Based upon the initial results, on October 2, 2001, SounPacific staff collected four (4) additional soil samples at the Site. One (1) soil sample was collected from below each of the dispensers (D1, D2, and D3) and one (1) sample was collected along the product lines (PR-1) (Figure 5). The collected samples were analyzed for TPHg, BTXE, and five (5) fuel-oxygenates (Table 1). Laboratory analysis reported the presence of petroleum hydrocarbons in all four (4) soil samples, with the highest concentration (9,060 ppm) being reported in the sample at location D-1. All the analytical results are summarized in Table 1.

3.3 2003 SUBSURFACE INVESTIGATION (SounPacific)

On January 17, 22, and 28, 2003, SounPacific performed a phased subsurface investigation at Northcrest 76. The investigation consisted of drilling six (6) hand-augured soil borings (B-1, B-2, B-3, B-4, B-5, and B-6) to depths of 12 feet bgs for the collection of soil samples. Groundwater was not encountered in any of the borings. The locations of the borings are shown in Figure 5. From the six (6) borings, 18 soil samples were collected and 16 soil samples were analyzed for TPHg, BTXE, MTBE, TPHd, and TPHmo. The remaining two (2) soil samples were analyzed for TPHg, TPHd, and TPHmo. In addition, a soil sample from boring B-1 (SB-1@4'), which was located in the vicinity of the former waste oil UST, was also analyzed for six (6) fuel-oxygenates, halogenated hydrocarbons, lead, lead scavengers, and CAM-5 metals. The laboratory analysis did not report any TPHg or BTXE in any samples; however, low levels of MTBE were reported in five (5) of the samples and TPHd was reported in two (2) samples. The additional analyses on sample SB-1@4', did not report any halogenated hydrocarbons or lead scavengers; however, methanol at 15 ppm was reported in the same sample. CAM-5 metals were reported at background levels. All the analytical results are summarized in Table 1.

In addition to the soil samples, a groundwater sample was collected from the domestic well at the adjacent Rice Repair Storage Shed (Figure 5) and analyzed for TPHg, BTXE, seven (7) fuel-oxygenates, lead scavengers, TPHd, TPHmo, and halogenated hydrocarbons. Analytical results for the groundwater sample were below laboratory detection limits, see Table 2.

3.4 2004 Subsurface Investigation (SounPacific)

During September 29 and 30, 2004, SounPacific performed a subsurface investigation at Northcrest 76. The event consisted of drilling nine (9) soil borings (B-7, B-8, B-9, B-10, B-11, B-12, B-13, B-14, and B-15) for the collection of soil and grab groundwater samples. The locations of the borings are shown in Figure 5. From the nine (9) borings, 59 soil samples were collected and analyzed for TPHg, TPHd, TPHmo, BTXE, and five (5) fuel-oxygenates. The laboratory analysis reported TPHg in four (4) of the analyzed samples, with the highest concentration of TPHg (4,000 ppm) being reported in the soil sample from boring B-9 collected just above the water table. BTXE compounds were reported in nine (9) of the analyzed samples, with the highest concentration of Toluene (7.9 ppm) in boring B-10, Xylene (226 ppm) and Ethylbenzene (80 ppm) in boring B-9. Of the fuel-oxygenates, MTBE was reported in 20 soil samples; however, concentrations did not exceed 4.1 ppm, and TAME was reported in 12 soil samples, of which 10 samples were from borings B-11, B-12, B-13. The highest concentration of TAME was 0.084 ppm (SB-13@12'). Tertiary butyl alcohol (TBA) was reported in eight (8) of the 12 samples that reported TAME, with the highest concentration being 2.2 ppm in sample SB-12@8'. TPHd was reported in eight (8) samples; however, with the exception of the sample SB-10@17' that reported 110 ppm, all TPHd concentrations were below 11 ppm. TPHmo was reported in three (3) samples at concentrations that ranged from 21 ppm (SB-13@4') to 39 ppm (SB-14@4'). All the analytical results are summarized in Table 1.

In addition to the soil samples, grab groundwater samples were collected from temporary wells installed in each of the nine (9) borings (Figure 5) and analyzed for TPHg, TPHd,

TPHmo, BTXE, and five (5) fuel-oxygenates. Inadequate groundwater could be collected in borehole B-11 to obtain a sample for TPHd and TPHmo analysis. No petroleum hydrocarbons were reported in the groundwater samples from borings B-7, B-8, and B-14. TPHg was reported in the samples from borings B-10, B-11, and B-12, with various BTEX compounds in the same borings and B-9. The highest concentrations were all reported from boring location B-10, with TPHg at 3,600 ppb, benzene at 57 ppb, toluene at 720 ppb, xylenes at 980 ppb, and ethylbenzene at 200 ppb. Fuel-oxygenates were reported in the same locations as the TPHg and the BTXE compounds, plus B-15. MTBE was reported in five (5) samples at concentrations ranging from 5.4 ppb (B-15) to 250 ppb (B-11), along with TAME in three (3) samples, at concentrations of 7.3 ppb (B-12) to 30 ppb (B-11). TPHmo was not reported in any of the samples; however, TPHd was reported from locations B10, B-12, and B-13 at concentrations of 180 ppb, 78 ppb, and 61 ppb, respectively. Detailed groundwater analytical results are summarized in Table 2.

4.0 SITE INVESTIGATION

The subsurface investigations conducted to date have included the drilling and sampling of both soil and groundwater samples from 17 locations at the Site. Previous subsurface investigations have identified soil contamination near the fuel dispenser island and in the south and southeast portion of the property. Groundwater impacted with petroleum hydrocarbons throughout the southeast portion of the Site was also identified from the previous investigation. However, the contamination has yet to be fully defined, and hence, additional investigation is required.

4.1 Proposed Scope of Work

To meet the objectives outline in section 2.1, the following scope of work is proposed:

4.1.1 Subsurface Investigation

To evaluate and delineate the petroleum hydrocarbons in soil and groundwater, SounPacific proposes the drilling and sampling of five (5) borings (PMW-1 through PMW-5), which will be converted into monitoring wells (PMW-1 through PMW-5) after soil samples are collected. The locations of the proposed borings/monitoring wells are shown in Figure 6. All well borings will be drilled with the use of a truck-mounted drill-rig. The results retrieved from the proposed borings/monitoring wells will be used to delineate the extent of the soil and groundwater contamination and further develop the conceptual model for the Site. SounPacific staff will oversee all facets of this investigative work.

The rational and objective for the borings/monitoring wells is presented below. However, it should be noted that the location of the wells are subject to change based upon the presence of underground utilities. The proposed locations for the groundwater monitoring wells are shown in Figure 6.

Proposed Monitoring Well PMW-1

Proposed well PMW-1 will be positioned in the central eastern area of the Site between the dispenser islands. Soil samples will be collected from the well boring to assist in the delineation of the vertical and lateral extent of the soil contamination that was identified during the previous investigation. The boring will be drilled to a depth of approximately 28 feet bgs and continuously sampled to obtain a detailed lithologic description of the subsurface soil. Collected soil samples will be subjected to field screening and retained for laboratory analysis if OVA readings are above 25 ppm.

Proposed Monitoring Well PMW-2

Monitoring Well PMW-2 will be located approximately 30 feet north from proposed location PMW-1. The purpose of this well will be to monitor the upgradient migration of the contamination. The well boring will be drilled to a depth of approximately 28 feet bgs and continuously sampled to obtain a detailed lithologic description of the subsurface soil.

Collected soil samples will be subjected to field screening and retained for laboratory analysis if OVA readings are above 25 ppm.

Proposed Monitoring Well PMW-3

Monitoring Well PMW-3 will be located on the public right-of-way (sidewalk), adjacent to the Site, on the west side of Northcrest Drive. This location is approximately 30 feet southeast of the proposed location PMW-1 and is the most easterly boring proposed at the Site. The purpose of this boring is to define the eastern extent of any soil and/or groundwater contamination. The well boring will be drilled to a depth of approximately 28 feet bgs and continuously sampled to obtain a detailed lithologic description of the subsurface soil. Collected soil samples will be subjected to field screening and retained for laboratory analysis if OVA readings are above 25 ppm. As this boring is located on a public right-of-way, an encroachment permit will be obtained from the city of Crescent City, prior to conducting the field work.

Proposed Monitoring Well PMW-4

Monitoring Well PMW-4 will be located approximately 30 feet southwest from the proposed location PMW-1. This location will be to monitor the downgradient migration of the contamination. The boring will be drilled to a depth of approximately 28 feet bgs and continuously sampled to obtain a detailed lithologic description of the subsurface soil. Collected soil samples will be subjected to field screening and retained for laboratory analysis if OVA readings are above 25 ppm.

Proposed Monitoring Well PMW-5

Monitoring Well PMW-5 will be located approximately 40 feet south-southeast from the proposed location PMW-1. The purpose of this location will be to monitor downgradient migration of the contamination. The boring will be drilled to a depth of approximately 28 feet bgs and continuously sampled to obtain a detailed lithologic description of the subsurface soil. Collected soil samples will be subjected to field screening and retained for laboratory analysis if OVA readings are above 25 ppm.

Proposed Monitoring Wells PMW-1 through PMW-5

Into the borings PMW-1, PMW-2, PMW-3, PMW-4, and PMW-5, groundwater monitoring wells PMW-1, PMW-2, PMW-3, PMW-4, and PMW-5, will be installed, respectively. Following the installation of the wells, each well will be surveyed, both vertically and horizontally, to a common benchmark. The purpose of the wells will be to confirm analytical results from previous subsurface investigations, determine actual groundwater flow direction and gradient, and incorporate them into a quarterly groundwater monitoring program to monitor contaminant levels and contaminant migration over time. A monitoring well installation permit will be obtained from DNCHD prior to monitoring well construction.

4.1.2 Direct-Push Drilling and Soil Sampling Method

At each well location a pilot hole will initially be drilled with a truck-mounted hydraulic drill rig using continuous core direct-push drilling by a State-licensed (C-57) driller to allow soil samples to be collected. Soil samples from each well boring will be collected and retained at a minimum of four (4) foot intervals, where lithologic changes occur, where areas of obvious contamination are present, and in the capillary fringe above groundwater. Soil samples will be visually inspected in the field, described, and screened for organic vapors using an organic vapor analyzer (OVA). Soil samples that indicate OVA levels greater than twenty-five ppm from the field screening method will be submitted for laboratory analysis. Field screening will be conducted by half filling a sealable plastic bag with the soil sample, allowing any vapors to collect in the bags headspace, and after a minimum of 10 minutes inserting the OVA probe into the bag's headspace for the analysis. All OVA readings will be recorded on the boring log. Soil samples will be inspected and documented by the project geologist for lithologic documentation of soil condition and classification using Unified Soil Classification System guidelines. If no OVA readings are reported, one (1) soil sample from the vadose zone in each boring will be retained for laboratory analysis. Additional samples may be collected and retained for laboratory analysis, based upon observations of the field geologist, to clarify field screening results, historical results and for QA/QC purposes.

Soil samples retained for laboratory analysis will be labeled, stored in appropriate sample containers, placed in coolers with ice, and kept at temperatures at or below four (4) degrees Celsius for transportation under chain-of-custody to a State certified laboratory for analysis. All drilling and sample tailings will be contained in sealed D.O.T. 17E/17H 55-gallon drums and stored on site for disposal.

4.1.3 Soil Analytical Method

All soil samples will be collected following the EPA guidelines. Soil samples selected for laboratory analysis will be analyzed for TPHd and TPHmo by **EPA Method 8015** and analyzed for TPHg, BTXE, and five (5) fuel-oxygenates by **EPA Method 8260b**. All laboratory analysis will be conducted by a state certified laboratory on a normal turnaround basis.

4.1.4 Monitoring Well Construction

It is proposed to install five (5) onsite groundwater monitoring wells (PMW-1 through PMW-5) at the Site. Following the completion of the soil sampling and lithologic study, each boring will be opened up with an eight (8) inch, outside diameter hollow-stem auger. Based on historical data, the maximum well depth is not anticipated to exceed 28 feet bgs. However, actual well screen placement and total depth will be based on groundwater level measurements encountered in the field and historical data.

The monitoring wells will be constructed of two (2) inch diameter, clean, flush-threaded, PVC well materials. The well screen itself will not exceed 15 feet in length and will consist of 0.02-inch machine cut slots. In each well, a filter pack of #2 1/2 sand will be placed in the annual space between the well casing and boring walls, and extend from the bottom of the boring to approximately 0.5 foot above the screened interval. Following placement of the sand filter pack, each well will be surged with a surge block in an effort to settle the sand

pack. Once field observations indicate that the sand pack has settled, the filter pack will be sealed by a one (1) foot layer of hydrated bentonite. The remaining annular space will be filled with cement bentonite grout, and surface construction of the wells will be completed with a locking, waterproof, flush-mount, traffic-rated cover or a locking steel monument. Proposed monitoring well construction details are shown in Figure 7. Some deviation of the well construction may occur based upon groundwater level measurements at the time of drilling.

Following the installation of the wells, a licensed surveyor will determine the elevation and location of each monitoring well at the site to a status datum point according to Geotracker specifications as required by the NCRWQCB. All data will be entered into the Geotracker database using the new x, y, z coordinate system.

4.1.5 Monitoring Well Development and Groundwater Sampling

Approximately 72 hours after the installation of the wells, each well will be developed using a purge pump or similar device. Well development will continue until all fines are removed and no turbidity is visually present. A minimum of 10 well volumes will be removed during the developing process unless the well goes dry, at which time well development will cease. During development, the pH, conductivity, and temperature of the extracted water will be tested at regular intervals to verify that representative samples of formation groundwater are present in the well. Following well development, the wells will be allowed to recharge a minimum of 24 hours prior to sampling. The first sampling event (Well Installation Sampling Event) will be conducted at this time. Stabilized groundwater levels will be measured during this event. Three (3) well volumes of groundwater will be purged from the wells, again testing pH, conductivity, temperature, and turbidity for signs of representative formation waters. Groundwater samples will be taken from the wells with disposable PVC bailers or a peristaltic pump, stored in appropriate containers (i.e. VOA vials), placed in coolers with ice, kept at or below four (4) degrees Celsius, and transported to a State certified laboratory under

chain-of-custody documentation for analysis. If the well(s) contain any free product, the thickness of the product will be measured in the field using a Solinst interface meter and no groundwater sample will be collected.

4.1.6 Groundwater Monitoring Program

Following the initial sampling, the new wells will be incorporated into a groundwater monitoring program. The groundwater monitoring program will consist of both gauging all wells on a monthly basis for a period of one (1) year, after which the wells will only be gauged on a quarterly basis, and the collection of groundwater samples for laboratory analysis on a quarterly basis. Each monitoring event will consist of measuring the depth to groundwater, followed by purging of the well of a minimum of three (3) well volumes, after which the well will be sampled for analysis. During purging activities, the extracted well water will be tested for pH, conductivity, temperature, and clarity for signs of representative formation waters. Groundwater samples will be collected from the wells with disposable PVC bailers or a peristaltic pump, stored in appropriate containers (i.e. VOA vials), placed in coolers with ice, kept at or below four (4) degrees Celsius, and transported to a State of California certified laboratory under appropriate chain-of-custody documentation for analysis.

Groundwater monitoring will continue in all wells until contaminant levels are either non-detect or deemed insignificant in a well for four (4) consecutive monitoring events. At that time, laboratory analysis of that well will be reduced to an annual occurrence; however, quarterly groundwater elevation measurements will continue.

4.1.7 Groundwater Analytical Methods

Groundwater samples from the monitoring wells will be collected following standard EPA protocols. Based upon historical analytical results, all groundwater samples will be analyzed for TPHd and TPHmo using **EPA Method 8015** and TPHg, BTXE, and five (5) fuel-

oxygenates following **EPA Method 8260b**. All laboratory analysis will be conducted by a state certified laboratory on a normal turnaround time.

4.1.8 Site Sanitation Procedures

All drill cuttings and groundwater extracted from wells and boreholes will be stored on site in D.O.T. 17E/17H 55-gallon drums. Laboratory analyses will be used to establish proper disposal procedures for cuttings and purge/development waters. Rinsate generated from steam cleaning drilling, development, and sampling equipment will be contained in a portable washbasin and pumped into 55-gallon drums for storage before disposal.

5.0 PROPOSED TIME SCHEDULE

The schedule for the proposed subsurface investigation at Northcrest 76, which is located at 1500 Northcrest Drive, Crescent City, California, is as follows:

- Following approval of the *Work Plan* from the NCRWQCB, subcontractors will be contracted, the required permits obtained, and the *Work Plan* implementation scheduled. It is expected that the field work will be completed within six (6) weeks of receiving *Work Plan* approval.

- Laboratory analysis will be conducted on a standard turnaround basis with the laboratory analytical results received within four (4) weeks of completing the field work. Upon receipt of the analytical data, the results will be reviewed and tabulated.

- Within ten (10) weeks of completing the field work, a Report of Findings (RoF) will be prepared and submitted to the NCRWQCB that includes formal tables, figures, boring logs, monitoring well installation data and recommendations for further activities, if deemed necessary.

Project implementation dates are subject to agency approval, permitting, and equipment scheduling. If there are any significant deviations from the proposed schedule all concerned parties will be informed. A two (2) to three (3) day drilling and sampling program is expected, with all concerned parties notified at least five (5) days before the proposed initiation. Formal laboratory results are expected four (4) weeks after submitting samples. The Report of Findings will encompass the field investigation, present findings, and propose recommendations regarding future activities at the site. In addition, all Geotracker information will be submitted.

Tables

Table 1
Soil Analytical Results
Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)	EDB (ppm)	Methanol (ppm)	Ethanol (ppm)
1-1A	1-1A	1/10/1989	ND < 5	ND < .05	ND < .05	ND < .05	ND < .05	----	----	----	----	----	----	----	----	----	----
2-2A	2-2A	1/10/1989	**15**	ND < .05	ND < .05	ND < .05	ND < .05	----	----	----	----	----	----	----	----	----	----
3-3A	3-3A	1/10/1989	----	ND < .05	ND < .05	ND < .05	ND < .05	----	----	----	----	----	ND < 10	----	----	----	----
4-4A	4-4A	1/10/1989	**6.0**	ND < .05	ND < .05	ND < .05	ND < .05	----	----	----	----	----	----	----	----	----	----
5-5A	5-5A	1/10/1989	----	ND < .05	ND < .05	ND < .05	ND < .05	----	----	----	----	----	ND < 10	----	----	----	----
6-6A	6-6A	1/10/1989	ND < 5	ND < .05	ND < .05	ND < .05	ND < .05	----	----	----	----	----	----	----	----	----	----
7-7A	7-7A	1/10/1989	ND < 5	ND < .05	ND < .05	ND < .05	ND < .05	----	----	----	----	----	----	----	----	----	----
dispenser soil	unknown	8/16/2001	**3,100**	**21**	**450**	**198**	**38**	ND < 25	----	----	----	----	----	----	----	----	----
D-1 @ 2.5'	D-1	10/2/2001	**9,060**	**16**	**454**	**582**	**101**	ND < 25	ND < 25	ND < 25	ND < 25	ND < 25,000	----	----	----	----	----
D-2 @ 2.5'	D-2	10/2/2001	**82.0**	**0.699**	**4.95**	**3.01**	**0.449**	**5.94**	ND < 0.125	**2.12**	ND < 0.125	ND < 125	----	----	----	----	----
D-3 @ 3'	D-3	10/2/2001	**4,340**	**18.3**	**531**	**822**	**127**	ND < 12.5	ND < 12.5	ND < 12.5	ND < 12.5	ND < 12,500	----	----	----	----	----
PR-1 @ 2.5'	PR-1	10/2/2001	**280**	**1.86**	**26.3**	**8.85**	**1.72**	**18.3**	ND < 0.125	ND < 0.125	ND < 0.125	ND < 125	----	----	----	----	----
SB-1 @ 4'	B-1	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	ND < 0.005	**15**	ND < 0.10
SB-1 @ 8'	B-1	1/28/2003	ND < 1.0	----	----	----	----	----	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-1 @ 12'	B-1	1/28/2003	ND < 1.0	----	----	----	----	----	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-2 @ 4.5'	B-2	1/17/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-2 @ 8'	B-2	1/17/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-2 @ 12'	B-2	1/17/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-3 @ 4'	B-3	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-3 @ 8'	B-3	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-3 @ 12'	B-3	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-4 @ 4'	B-4	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.16**	----	----	----	----	**1.5**	ND < 10	----	----	----
SB-4 @ 8'	B-4	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.047**	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-4 @ 12'	B-4	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.92**	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-5 @ 4'	B-5	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-5 @ 8'	B-5	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.095**	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-5 @ 12'	B-5	1/28/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.053**	----	----	----	----	**1.5**	ND < 10	----	----	----
SB-6 @ 5'	B-6	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-6 @ 8'	B-6	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-6 @ 12'	B-6	1/22/2003	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	----	----	----	----	ND < 1.0	ND < 10	----	----	----
SB-7 @ 4'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-7 @ 8'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-7 @ 12'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-7 @ 16'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-7 @ 20'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-7 @ 24'	B-7	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	**1.3**	ND < 10	----	----	----
SB-8 @ 3'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-8 @ 7'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-8 @ 12'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-8 @ 16'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-8 @ 20'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----
SB-8 @ 22'	B-8	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10	----	----	----

Table 1 (cont.)
Soil Analytical Results
Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)
SB-9 @ 4'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 1.0
SB-9 @ 5.5'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-9 @ 8'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.011**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-9 @ 12'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-9 @ 16'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-9 @ 18'	B-9	9/29/2004	**4,000**	ND < 2.5	ND < 2.5	**226**	**80**	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 25	**11**	ND < 10
SB-9 @ 22'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-9 @ 24'	B-9	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-10 @ 3'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	**0.062**	**0.019**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	**1.2**	**30**
SB-10 @ 8'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	**0.008**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-10 @ 9'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	**0.005**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	**3.7**	ND < 10
SB-10 @ 12'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-10 @ 14'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	**0.006**	ND < 0.005	**0.015**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	**1.4**	ND < 10
SB-10 @ 16'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	**0.011**	**0.012**	**0.011**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	**1.0**	ND < 10
SB-10 @ 17'	B-10	9/29/2004	**890**	ND < 5.0	ND < 5.0	**132**	**29**	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	**110**	ND < 10
SB-10 @ 20'	B-10	9/29/2004	ND < 110	ND < 1.1	**7.9**	**8.7**	**1.6**	ND < 1.1	ND < 1.1	ND < 1.1	ND < 1.1	ND < 11	**1.3**	ND < 10
SB-10 @ 24'	B-10	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-11 @ 4'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-11 @ 8'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-11 @ 12'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.082**	ND < 0.005	**0.006**	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-11 @ 14.5'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.14**	ND < 0.005	**0.01**	ND < 0.005	**0.16**	ND < 1.0	ND < 10
SB-11 @ 20'	B-11	9/29/2004	**1.2**	ND < 0.005	**0.021**	**0.041**	**0.078**	**0.25**	ND < 0.005	**0.027**	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-11 @ 24'	B-11	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-12 @ 4'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.007**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-12 @ 8'	B-12	9/29/2004	**1**	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**4.1**	ND < 0.005	**0.17**	ND < 0.005	**2.2**	ND < 1.0	ND < 10
SB-12 @ 12'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.69**	ND < 0.005	**0.013**	ND < 0.005	**0.33**	ND < 1.0	ND < 10
SB-12 @ 16'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.3**	ND < 0.005	**0.008**	ND < 0.005	**0.19**	ND < 1.0	ND < 10
SB-12 @ 20'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.35**	ND < 0.005	**0.018**	ND < 0.005	**0.086**	ND < 1.0	ND < 10
SB-12 @ 24'	B-12	9/29/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-13 @ 4'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	**21**
SB-13 @ 8'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.062**	ND < 0.005	**0.007**	ND < 0.005	**0.16**	ND < 1.0	ND < 10
SB-13 @ 12'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.76**	ND < 0.005	**0.084**	ND < 0.005	**0.11**	ND < 1.0	ND < 10
SB-13 @ 16'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.083**	ND < 0.005	**0.006**	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-13 @ 20'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.45	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-13 @ 21'	B-13	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10

Table 1 (cont.)
Soil Analytical Results
Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Xylenes (ppm)	Ethylbenzene (ppm)	MTBE (ppm)	DIPE (ppm)	TAME (ppm)	ETBE (ppm)	TBA (ppm)	TPHd (ppm)	TPHmo (ppm)
SB-14 @ 4'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	**39**
SB-14 @ 8'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.007**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-14 @ 12'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.24**	ND < 0.005	**0.025**	ND < 0.005	**0.094**	ND < 1.0	ND < 10
SB-14 @ 16'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.039**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-14 @ 20'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	**1**	ND < 10
SB-14 @ 24'	B-14	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-15 @ 4'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-15 @ 8'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.007**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-15 @ 12'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.49**	ND < 0.005	**0.029**	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-15 @ 16'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	**0.069**	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-15 @ 20'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10
SB-15 @ 24'	B-15	9/30/2004	ND < 1.0	ND < 0.005	ND < 0.005	ND < 0.01	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.05	ND < 1.0	ND < 10

Sample ID	Sample Location	Sample Date	Cadmium (ppm)	Chromium (ppm)	Copper (ppm)	Lead (ppm)	Nickel (ppm)	Zinc (ppm)
SB-1 @ 4'	B-1	1/28/2003	ND < 0.50	**190**	**14**	**13**	**140**	**39**
SB-1 @ 8'	B-1	1/28/2003	ND < 0.50	**200**	**12**	ND < 1.0	**160**	**25**
SB-1 @ 12'	B-1	1/28/2003	ND < 0.50	**190**	**11**	ND < 1.0	**170**	**25**

notes:

TPHg: Total petroleum hydrocarbons as gasoline.

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

ETBE: Ethyl tertiary butyl ether

TBA: Tertiary butanol

TPHd: Total petroleum hydrocarbons as diesel.

ppm: parts per million = µg/g = mg/kg = 1000 µg/kg

ND: Not detected. Sample was detected below the method detection limit as shown.

Table 1 (cont.)
Soil Analytical Results

Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Sample ID	SB-1@4'		**Sample ID**	SB-1@4'	
Sample Date	1/28/2003		**Sample Date**	1/28/2003	
ANALYTE	R/L	Results/ppm	ANALYTE	R/L	Results/ppm
Dichlorodiflouromethane	0.005	ND	Dibromochloromethane	0.005	ND
Chloromethane	0.005	ND	1,2-Dibromoethane	0.005	ND
Vinyl chloride	0.005	ND	Chlorobenzene	0.005	ND
Bromomethane	0.005	ND	1,1,1,2-Tetrachloroethane	0.005	ND
Chloroethane	0.005	ND	Ethylbenzene	0.005	ND
Trichlorofluoromethane	0.005	ND	m,p-Xylene	0.005	ND
Acetone	0.05	ND	o-Xylene	0.005	ND
1,1-Dichloroethene	0.005	ND	Styrene	0.005	ND
Iodomethane	0.005	ND	Bromoform	0.005	ND
Methylene chloride	0.005	ND	Isopropylbenzene	0.005	ND
Carbon disulfide	0.005	ND	Bromobenzene	0.005	ND
trans-1,2-Dichloroethene	0.005	ND	1,1,2,2-Tetrachloroethane	0.005	ND
1,1-Dichloroethane	0.005	ND	1,2,3-Trichloropropane	0.005	ND
2-Butanone	0.05	ND	n-Propylbenzene	0.005	ND
2,2-Dichloropropane	0.005	ND	2-Chlorotoluene	0.005	ND
cis-1,2-Dichloroethene	0.005	ND	4-Chlorotoluene	0.005	ND
Bromochloromethane	0.005	ND	1,3,5-Trimethylbenzene	0.005	ND
Chloroform	0.005	ND	tert-Butylbenzene	0.005	ND
1,1,1-Trichloroethane	0.005	ND	1,2,4-Trimethylbenzene	0.005	ND
Carbon tetrachloride	0.005	ND	sec-Butylbenzene	0.005	ND
1,1-Dichloropropene	0.005	ND	1,3-Dichlorobenzene	0.005	ND
Benzene	0.005	ND	4-Isopropyltoluene	0.005	ND
1,2-Dichloroethane	0.005	ND	1,4-Dichlorobenzene	0.005	ND
Trichloroethene	0.005	ND	1,2-Dichlorobenzene	0.005	ND
1,2-Dichloropropane	0.005	ND	n-Butylbenzene	0.005	ND
Dibromomethane	0.005	ND	1,2-Dibromo-3-chloropropane	0.005	ND
Bromodichloromethane	0.005	ND	1,2,4-Trichlorobenzene	0.005	ND
cis-1,3-Dichloropropene	0.005	ND	Hexachlorobutadiene	0.005	ND
4-Methyl-2-pentanone	0.05	ND	Naphthalene	0.005	ND
Toluene	0.005	ND	1,2,3-Trichlorobenzene	0.005	ND
trans-1,3-Dichloropropene	0.005	ND	Ethanol	0.10	ND
1,1,2-Trichloroethane	0.005	ND	tert-Butanol	0.05	ND
Tetrachloroethene	0.005	ND	MTBE	0.005	ND
1,3-Dichloropropane	0.005	ND	Diisopropyl ether	0.005	ND
2-Hexanone	0.05	ND	Tethyl tert-butyl ether	0.005	ND
1,2-Dibromoethane	0.005	ND	tert-Amyl methyl ether	0.005	ND

Notes:
TPHg: Total petroleum hydrocarbons as gasoline
TPHd: Total petroleum hydrocarbons as diesel
MTBE: Methyl tertiary butyl ether
ETBE: Ethyl tertiary butyl ether
TAME: Tertiary amyl methyl ether
TBA: Tertiary butanol
DIPE: Diisopropyl ether
ppm: parts per million = µg/g = mg/kg = 1000µg/kg.
TPHmo: Total petroleum hydrocarbons as motor oil
EDB: 1,2-dibromoethane
ND: Not detected at or above the method detection limit as shown.

Table 2
Groundwater Analytical Results
Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Sample ID	Sample Location	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)
8-8A	8-8A	1/10/1989	ND < 5,000	---	---	---	---	---	---	---	---	---	---	---
SBGW-7	B-7	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
SBGW-8	B-8	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
SBGW-9	B-9	9/30/2004	ND < 50	ND < 0.5	**1.5**	**4.2**	**2.1**	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
SBGW-10	B-10	9/30/2004	**3,600**	**57**	**720**	**980**	**200**	**53**	ND < 0.5	**11**	ND < 0.5	ND < 5.0	**180**	ND < 500
SBGW-11	B-11	9/30/2004	**1,300**	**6.2**	**150**	**422**	**140**	**250**	ND < 0.5	**30**	ND < 0.5	ND < 5.0	----	----
SBGW-12	B-12	9/30/2004	**100**	**1.3**	ND < 0.5	**2.5**	**0.6**	**130**	ND < 0.5	**7.3**	ND < 0.5	ND < 5.0	**78**	ND < 500
SBGW-13	B-13	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	**13**	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	**61**	ND < 500
SBGW-14	B-14	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500
SBGW-15	B-15	9/30/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	**5.4**	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500

Notes:

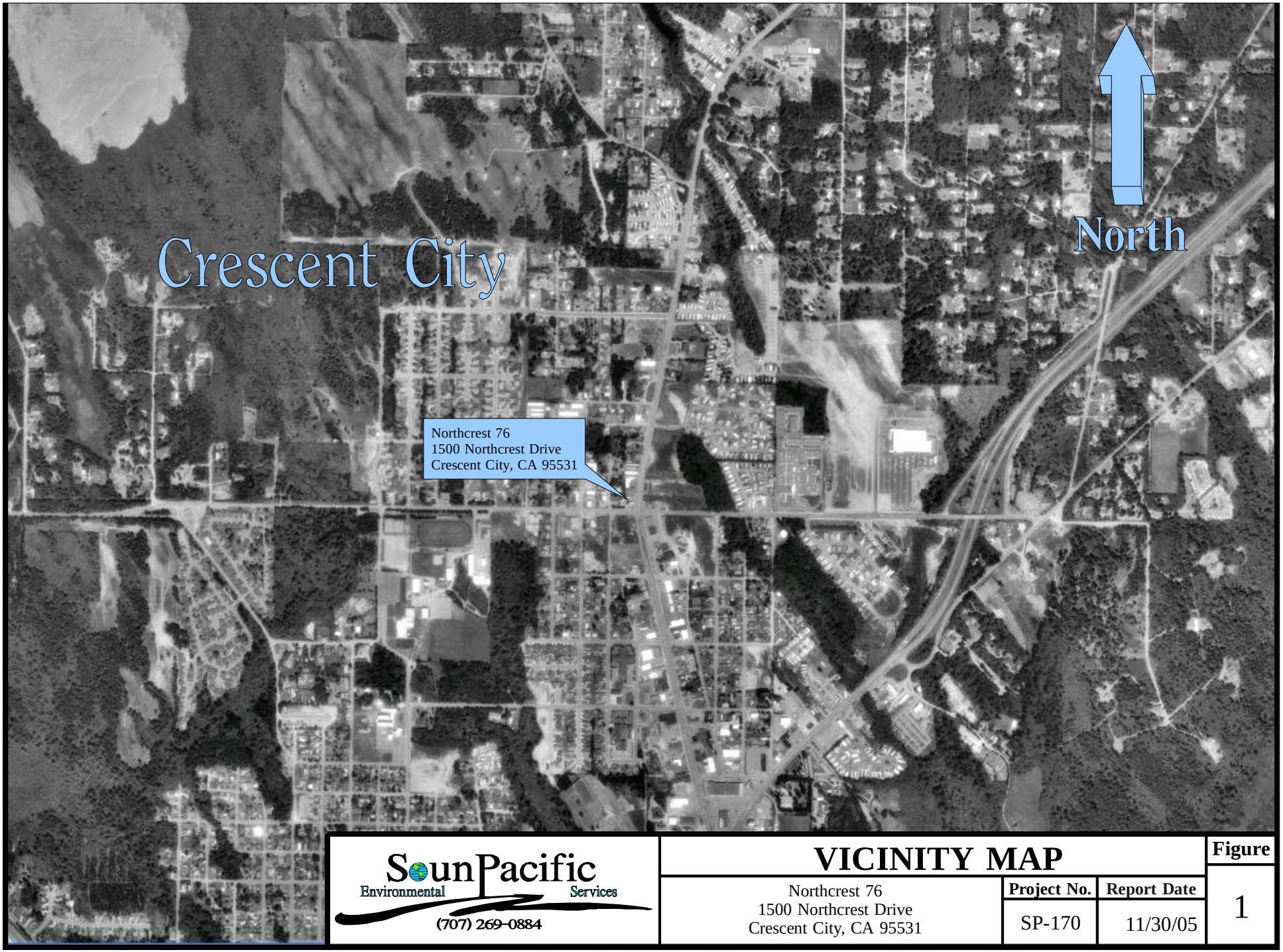
TPHg: Total petroleum hydrocarbons as gasoline
MTBE: Methyl tertiary butyl ether
TAME: Tertiary amyl methyl ether
DIPE: Diisopropyl ether
TPHmo: Total petroleum hydrocarbons as motor oil
TPHd: Total petroleum hydrocarbons as diesel
ETBE: Ethyl tertiary butyl ether
TBA: Tertiary butanol
ppb: parts per billion = µg/L = 0.001 mg/L = 0.001 ppm.
ND: Not detected at or above the method detection limit as shown.

Table 2 (cont.)
Groundwater Analytical Results

Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Sample ID	Domestic Well		**Sample ID**	Domestic Well	
Sample Date	1/17/2003		**Sample Date**	1/17/2003	
ANALYTE	R/L	Results/ppb	ANALYTE	R/L	Results/ppb
Methanol	5.0	ND	TPHg	50	ND
TPHmo	500	ND	TPHd	50	ND
Dichlorodiflouromethane	0.5	ND	Dibromochloromethane	0.5	ND
Chloromethane	0.5	ND	1,2-Dibromoethane	0.5	ND
Vinyl chloride	0.5	ND	Chlorobenzene	0.5	ND
Bromomethane	0.5	ND	1,1,1,2-Tetrachloroethane	0.5	ND
Chloroethane	0.5	ND	Ethylbenzene	0.5	ND
Trichlorofluoromethane	0.5	ND	m,p-Xylene	0.5	ND
Acetone	5.0	ND	o-Xylene	0.5	ND
1,1-Dichloroethene	0.5	ND	Styrene	0.5	ND
Iodomethane	0.5	ND	Bromoform	0.5	ND
Methylene chloride	5.0	ND	Isopropylbenzene	0.5	ND
Carbon disulfide	0.5	ND	Bromobenzene	0.5	ND
trans-1,2-Dichloroethene	0.5	ND	1,1,2,2-Tetrachloroethane	0.5	ND
1,1-Dichloroethane	0.5	ND	1,2,3-Trichloropropane	0.5	ND
2-Butanone	5.0	ND	n-Propylbenzene	0.5	ND
2,2-Dichloropropane	0.5	ND	2-Chlorotoluene	0.5	ND
cis-1,2-Dichloroethene	0.5	ND	4-Chlorotoluene	0.5	ND
Bromochloromethane	0.5	ND	1,3,5-Trimethylbenzene	0.5	ND
Chloroform	0.5	ND	tert-Butylbenzene	0.5	ND
1,1,1-Trichloroethane	0.5	ND	1,2,4-Trimethylbenzene	0.5	ND
Carbon tetrachloride	0.5	ND	sec-Butylbenzene	0.5	ND
1,1-Dichloropropene	0.5	ND	1,3-Dichlorobenzene	0.5	ND
Benzene	0.5	ND	4-Isopropyltoluene	0.5	ND
1,2-Dichloroethane	0.5	ND	1,4-Dichlorobenzene	0.5	ND
Trichloroethene	0.5	ND	1,2-Dichlorobenzene	0.5	ND
1,2-Dichloropropane	0.5	ND	n-Butylbenzene	0.5	ND
Dibromomethane	0.5	ND	1,2-Dibromo-3-chloropropane	0.5	ND
Bromodichloromethane	0.5	ND	1,2,4-Trichlorobenzene	0.5	ND
cis-1,3-Dichloropropene	0.5	ND	Hexachlorobutadiene	0.5	ND
4-Methyl-2-pentanone	5.0	ND	Naphthalene	0.5	ND
Toluene	0.5	ND	1,2,3-Trichlorobenzene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND	Ethanol	13	ND
1,1,2-Trichloroethane	0.5	ND	tert-Butanol	5.0	ND
Tetrachloroethene	0.5	ND	MTBE	0.5	ND
1,3-Dichloropropane	0.5	ND	Diisopropyl ether	0.5	ND
2-Hexanone	5.0	ND	Tethyl tert-butyl ether	0.5	ND
1,2-Dibromoethane	0.5	ND	tert-Amyl methyl ether	0.5	ND

Figures



SunPacific Environmental Services
(707) 269-0884

VICINITY MAP

Northcrest 76
1500 Northcrest Drive
Crescent City, CA 95531

Project No.	Report Date	Figure
SP-170	11/30/05	1

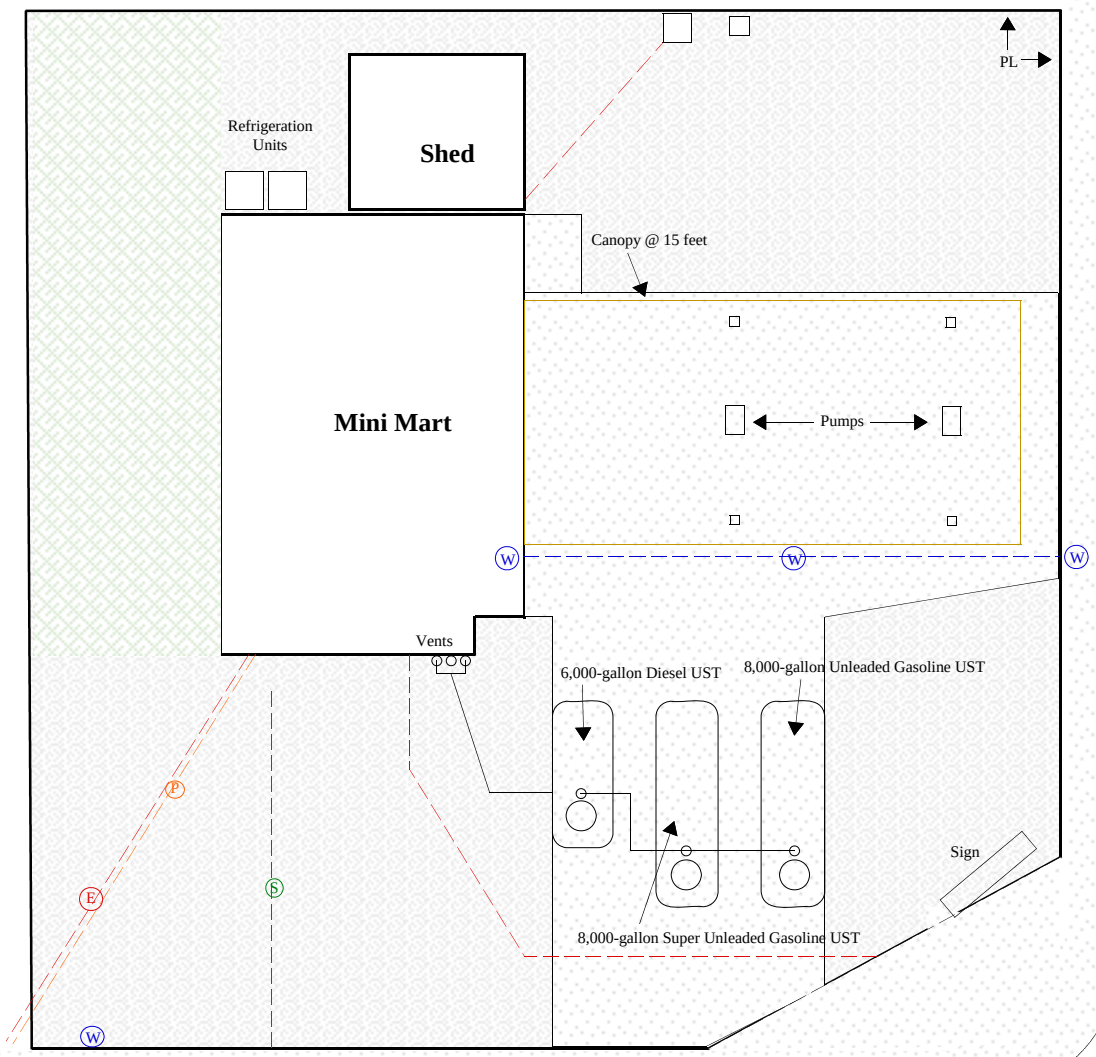
LEGEND

- Asphalt Surface
- Cement Surface
- Vegetation
- Ⓤ Above Ground Utility Pole
- Ⓦ Water Spigot
- Ⓦ Underground Water Line
- Ⓔ Underground Electric Line
- Ⓟ Underground Phone Line
- Ⓢ Underground Sewer Line

0 20 40

APPROXIMATE SCALE IN FEET

Humboldt Moving & Storage



NORTH

Northcrest Drive

Rice Repair Storage Shed

Washington Boulevard

Environmental Services

SITE PLAN

Figure 2

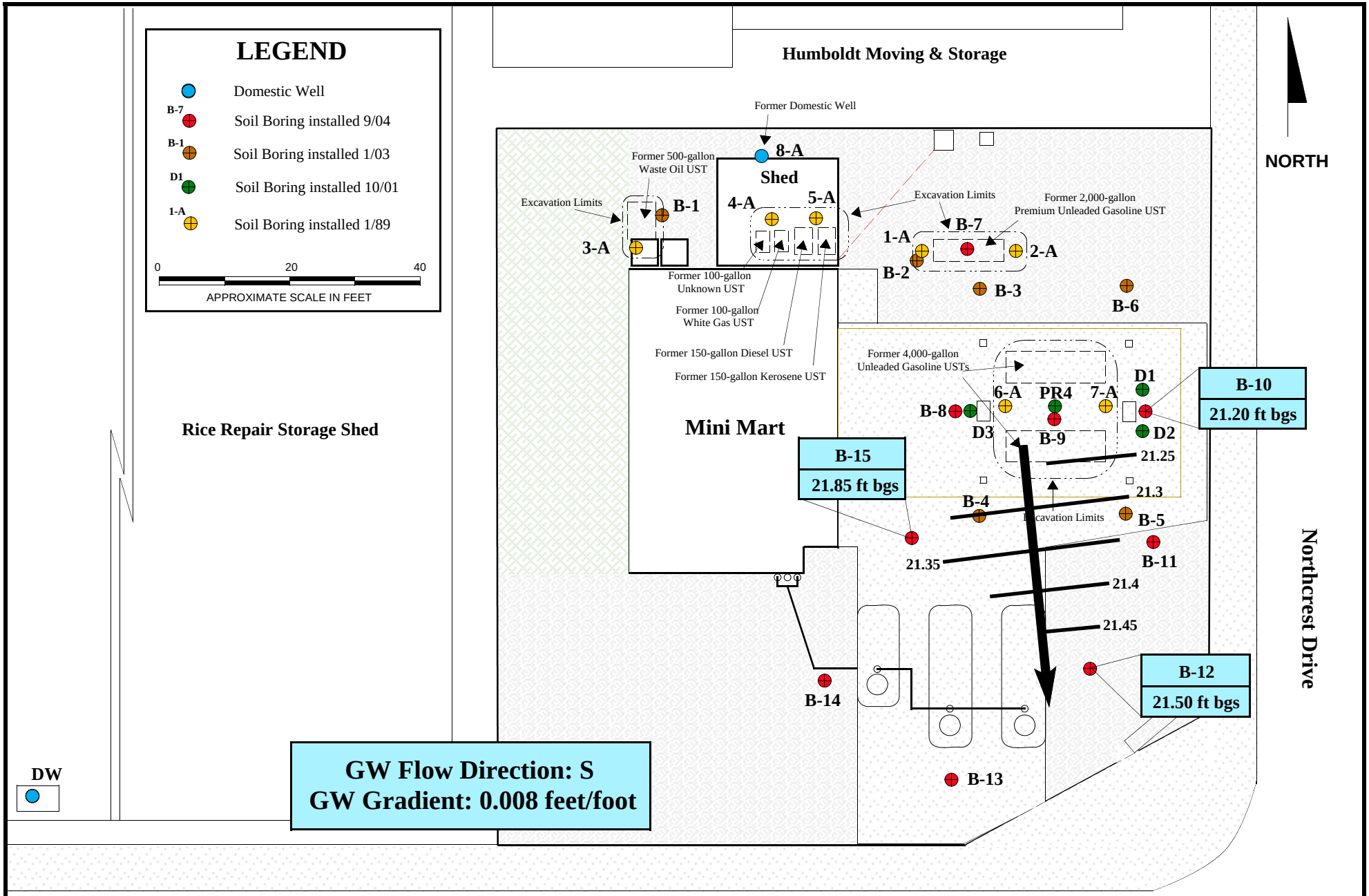
Northcrest 76 1500 Northcrest Drive Crescent City, California 95531	Project No.	Report Date
	SP-170	11/30/05

SunPacific Environmental Services
(707) 269-0884

AERIAL/TOPO MAP

Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Project No.	Report Date	Figure
SP-165	11/30/05	3

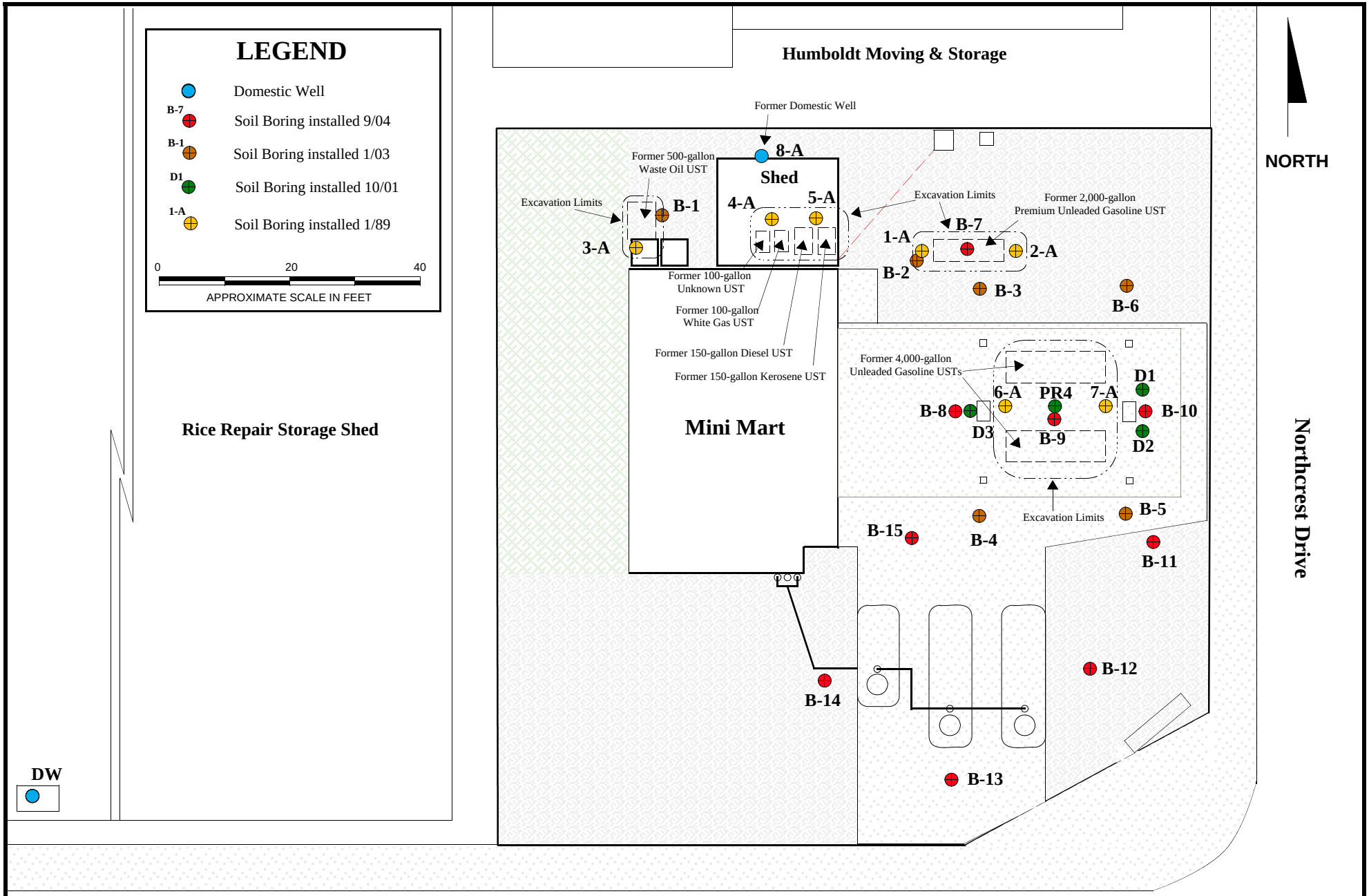


Environmental Services

SEPTEMBER 2004 GRADIENT MAP

Figure 4

Northcrest 76 1500 Northcrest Drive Crescent City, California 95531	Project No.	Report Date
	SP-170	11/30/05



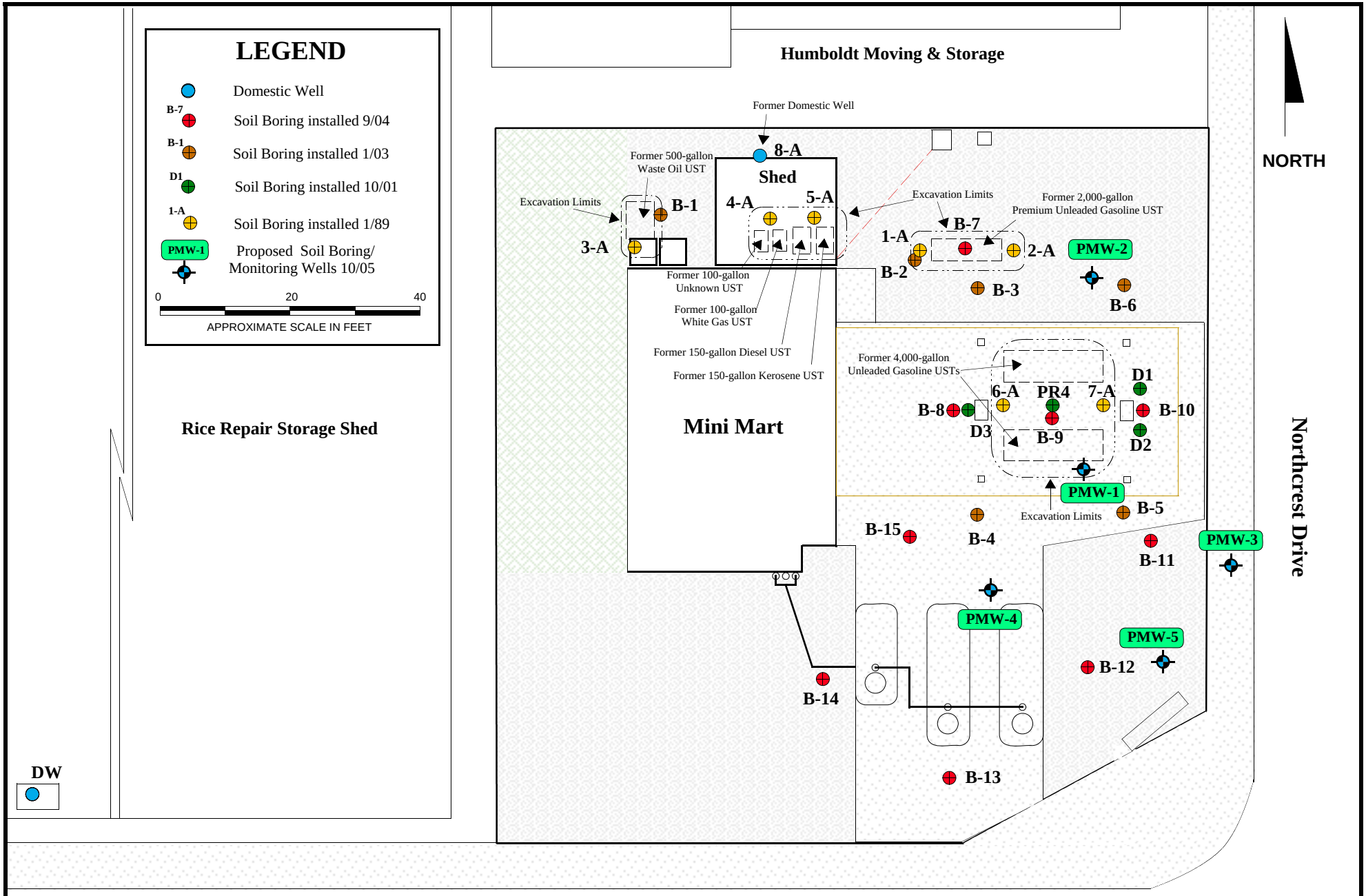
Environmental Services

PREVIOUS INVESTIGATIONS

Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Project No.	Report Date
SP-170	11/30/05

Figure 5



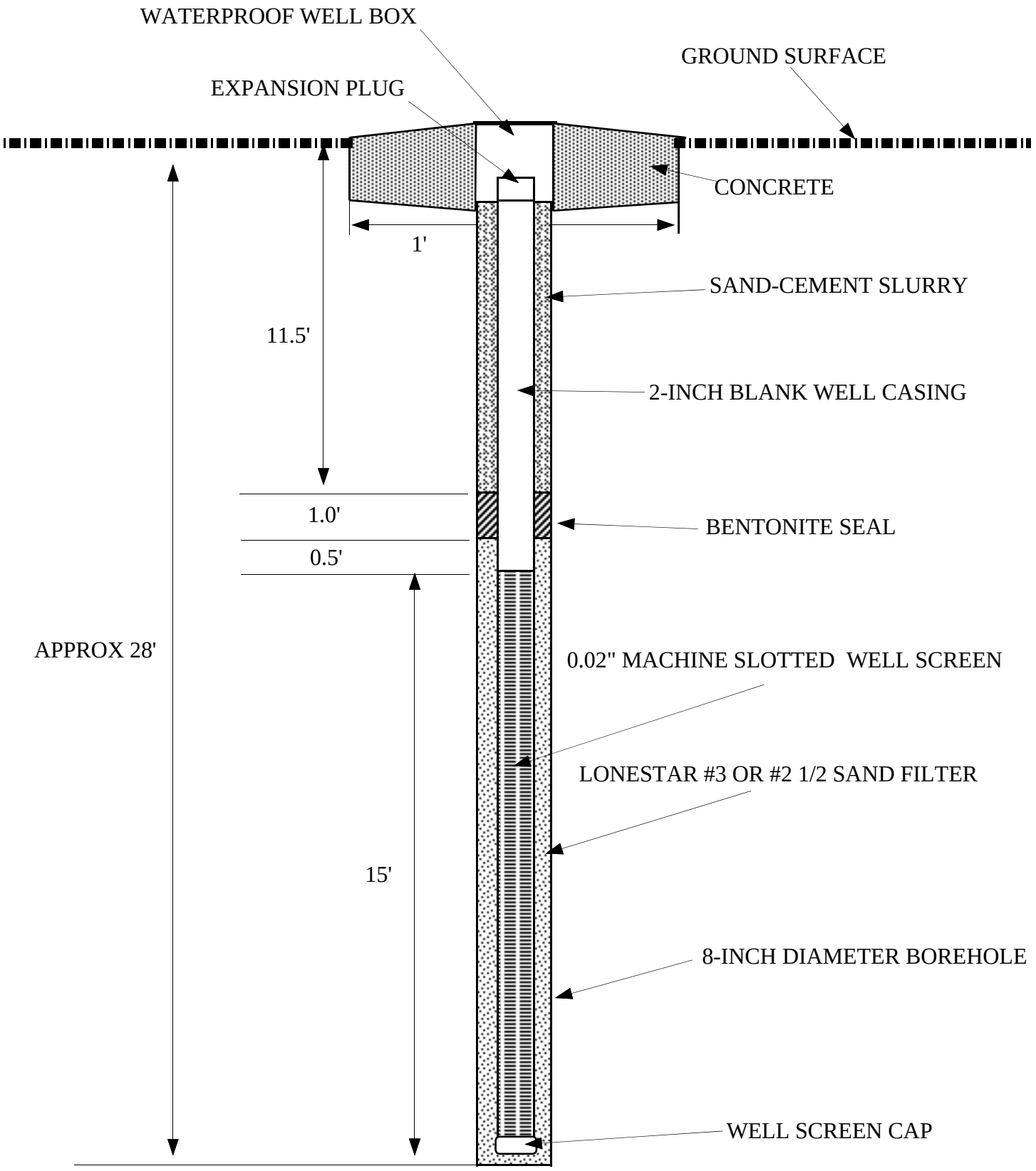
Environmental Services

PROPOSED INVESTIGATION

Northcrest 76
1500 Northcrest Drive
Crescent City, California 95531

Project No.	Report Date
SP-170	11/30/05

Figure 6



Drawing Not to Scale

Environmental Services	**MONITORING WELL CONSTRUCTION DIAGRAM**		Figure
	Northcrest 76 1500 Northcrest Drive Crescent City, California 95531	Project No. SP-170	Report Date 11/30/05	7